

Science Education

CONTENTS TO VOLUME 80, 1996

Issue 1, January

Editorial

R. A. Duschl	1
--------------------	---

The Professional Development of College Science Professors as Science Teacher Educators

P. M. Fedock, R. Zambo, and W. W. Cobern	5
--	---

Perspectives, Partnerships, and Values in Science Education: A University and Public Elementary School Collaboration

S. R. Herwitz and M. Guerra	21
-----------------------------------	----

LEARNING, James Stewart and Peter W. Hewson, Section Editors

Development of Science Concepts within a Vygotskian Framework

A. C. Howe	35
------------------	----

Beyond Constructivism

J. F. Osborne	53
---------------------	----

COMMENTS AND CRITICISMS

Leaving Home for Graduate Science Education in the G-7 Countries: To What End?

W. W. Cobern	63
--------------------	----

Credentialing Foreign Researchers in Science Education: Development or Dependence?

N. Bizzo	85
----------------	----

Tailoring Science Education Graduate Programs to the Needs of All Students

Z. R. Dagher and S. B. Boujaoude	89
--	----

Comment on Lunetta and van den Berg

J. B. Fonseca	93
---------------------	----

The Empowerment of Graduate Science Education Students from Developing Countries:

A Comment on Lunetta and van den Berg

J. George	97
-----------------	----

In Support of Culturally and Individually Responsive Science Education Graduate

Programs for International Students: Comment on Lunetta and van den Berg

O. J. Jegede	101
--------------------	-----

Comment on Lunetta and van den Berg

P. Naidoo	105
-----------------	-----

VOLUME CONTENTS

Four-Eyed Fish: The Ideal for Non-Western Graduates of Western Science Education

Graduate Programs

- M. Ogawa 107

Comment on Lunetta and van den Berg

- S. Seepe 111

Tailoring Graduate Programs: A Response to Commentary from the Science Education

Global Village

- E. van den Berg and V. N. Lunetta 115

Issue 2, April

Development of a Pool of Scientific Literacy Test-Items Based on Selected AAAS

Literacy Goals

- R. C. Laugsch and P. E. Spargo 121

The Contradiction between Teachers' Instructional Goals and Their Assessment Practices in

High School Biology Courses

- L. Bol and A. Strage 145

SCIENCE TEACHER EDUCATION, Thomas Dana and Vincent Lunetta, Section Editors

A Case Study of a Teacher's Progress toward Using a Constructivist View of Learning to

Inform Teaching in Elementary Science

- K. Appleton and H. Asoko 165

LEARNING, James Stewart and Peter W. Hewson, Section Editors

Chemistry Students' Conceptions of Solubility: A Phenomenography

- J. V. Ebenezer and G. L. Erickson 181

INTERNATIONAL SCIENCE EDUCATION, William W. Coburn, Section Editor

Science Education in the People's Republic of China

- W. Wang, J. Wang, G. Zhang, Y. Lang, and V. J. Mayer 203

ISSUES AND TRENDS, Glen S. Aikenhead, Section Editor

Cultural Myths as Constraints to the Enacted Science Curriculum

- K. Tobin and C. J. McRobbie 223

Issue 3, June

What Counts as Quality in Qualitative Research? (Guest Editorial)

- D. A. Roberts 243

Learning the Scientific "Story": A Case Study in the Teaching and Learning of

Elementary Thermodynamics

- M. Arnold and R. Millar 249

VOLUME CONTENTS

SCIENCE TEACHER EDUCATION, *Thomas Dana and Vincent Lunetta, Section Editors*

A Qualitative Study of Factors Influencing Science Teaching Self-Efficacy of Elementary Level Teachers

- L. Ramey-Gassert, M. G. Shroyer, and J. R. Staver 283

Representation of the Conceptual Change Model in Science Teacher Education

- N. R. Thorley and R. T. Stofflett 317

LEARNING, *James Stewart and Peter W. Hewson, Section Editors*

Children's Approaches to the Concept of Volume

- D. Potari and V. Spiliotopoulou 341

COMMENTS AND CRITICISMS

Comment on "Multiculturalism, Universalism, and Science Education"

- A. Ahlgren 361

Response to Ahlgren

- W.B. Stanley and N. W. Brickhouse 365

Issue 4, July

Science Education Journals: From Theory to Practice

- L. Viglietta 367

Evolution and the Textbook Structure of Biology

- D. E. Moody 395

SCIENCE TEACHER EDUCATION, *Thomas Dana and Vincent Lunetta, Section Editors*

Influence of a Cooperative Early Field Experience on Preservice Elementary Teachers' Science Self-Efficacy

- J. R. Cannon and L. C. Scharmann 419

Christian Preservice Teachers' Practical Arguments in a Science Curriculum and Instruction Course

- J. V. Ebenezer 437

LEARNING, *James Stewart and Peter W. Hewson, Section Editors*

Students' Operations with the Weight Concept

- I. Galili and D. Kaplan 457

Issue 5, September

What's in a Name? The Section for Culture and Comparative Studies (Guest Editorial)

- W. W. Cobern 489

VOLUME CONTENTS

Large-Scale Exploration of Pupils' Understanding of the Nature of Science	
J. Solomon, L. Scott, and J. Duveen	493
Secondary Students' Mental Models of Atoms and Molecules: Implications for Teaching Chemistry	
A. G. Harrison and D. F. Treagust	509
SCIENCE TEACHER EDUCATION, Thomas Dana and Vincent Lunetta, Section Editors	
A Case Study of Change in Elementary Student Teacher Thinking during an Independent Investigation in Science: Learning about the "Face of Science That Does Not Yet Know"	
B. L. Shapiro	535
LEARNING, James Stewart and Peter W. Hewson, Section Editors	
Constructivism and Evidence from Children's Ideas	
P. M. Johnson and R. Gott	561
ISSUES AND TRENDS, Glen S. Aikenhead, Section Editor	
Worldview Theory and Conceptual Change in Science Education	
W. W. Cobern	579
Call for Papers	611
Issue 6, November	
Gender Differences in Middle Grade Science Achievement: Subject Domain, Ability Level, and Course Emphasis	
V. E. Lee and D. T. Burkam	613
Literacy Skills in Science Learning among Linguistically Diverse Students	
O. Lee and S. H. Fradd	651
An STS Case Study about Students' Decision Making on the Waste Issue	
K. Kortland	673
Cognitive Variables in Problem Solving in Chemistry: A Revisited Study	
K.-W. L. Lee, N.-K. Goh, L.-S. Chia, and C. Chin	691
SCIENCE TEACHER EDUCATION, Thomas Dana and Vincent Lunetta, Section Editors	
Metaphors as Seeds for Conceptual Change and the Improvement of Science Teaching	
K. Tobin and D. J. Tippins	711
Acknowledgement of Special Reviewers	731
Volume 80 Author Index	735
Volume 80 Contents	I

